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EXAMINER
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HASAN, SYED Y

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,804	<b>Applicant(s)</b> MIYAGOSHI ET AL.	
	<b>Examiner</b> Syed Y. Hasan	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/27/2003, 11/04/2005, 11/30/2006.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 4 and 22 – 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi et al (US 7136573)

**Regarding claim 1**, Kikuchi et al discloses a method for ensuring a storage time for digital broadcast at the time of storing data for a digitized and then transmitted broadcast, comprising the steps of:

monitoring (col 10, lines 44 – 45) a predetermined recording time for the broadcast (col 2, lines 55 – 57) and a bit-rate of the broadcast (col 9, lines 47 – 48) and calculating, in real time (col 4, lines 31 – 32) a required capacity of a storage medium (col 2, lines 60 – 64)

determining whether or not said calculated required capacity of the storage medium can be contained within an empty area or a freely limited area of the storage medium (col 16, lines 43 – 47)

if said calculated required capacity of the storage medium cannot be contained

as the result of said determination, converting, in real time, said bit-rate of the broadcast into a smaller one (col 9, lines 62 – 64) and

storing said converted broadcast in said storage medium (col 16, lines 48 – 49)

**Regarding claim 2**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast further comprising the steps of:

if said calculated required capacity of the storage medium can be contained as the result of said determination, determining whether or not said empty area or freely limited area of the storage medium remains (col 16, lines 43 – 47)

if said empty area or freely limited area remains, converting, in real time, said bit-rate of the broadcast into a larger one (col 2, lines 42 – 46, illustrates control of bit rate based on capacity of storage) and

storing said converted broadcast into said storage medium (col 16, 48 – 49)

**Regarding claim 3**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast further comprising the step of:

if said calculated required capacity of the storage medium can be contained as the result of said determination (col 16, lines 43 – 47) storing said broadcast in said storage medium without converting the bit-rate (col 2, lines 42 – 46, illustrates control of bit rate based on capacity of storage)

**Regarding claim 4**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast, wherein said step of converting said bit-rate of the digitized broadcast into a smaller one is an operation of missing a part of said broadcast data (col 2, lines 39 – 41 illustrating poor quality with a manifestation of missing data)

**Claim 22** is rejected based on claim 1 above.

**Claim 23** is rejected based on claim 2 above.

**Claim 24** is rejected based on claim 3 above.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Bigham et al (US 5684799)

**Regarding claim 5**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast, wherein said step of converting said bit-rate of the digitized broadcast into a smaller one (col 2, lines 39 – 41, illustrates small bit-rate)

However, Kikuchi et al does not disclose an operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast

On the other hand, Bigham et al, teaches an operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast (col 9, lines 20 – 30)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate an operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast as taught by Bigham et al

in the system of Kikuchi et al in order to provide efficient resource management to optimize economies of scale.

5. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Bigham et al (US 5684799) and further in view of Kim et al (US 2002/0159348)

**Regarding claim 6**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1 above)

However, Kikuchi et al does not disclose wherein said operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast is performed by utilizing a system for compressing an analog broadcast, decoding the compressed digital data and then playing back the resultant data.

On the other hand, Bigham et al, teaches wherein said operation of returning said broadcast in a baseband and performing the compression processing again upon the resultant broadcast is performed (col 9, lines 20 – 30)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein said operation of returning said broadcast in a baseband and performing the compression processing again upon the resultant broadcast is performed as taught by Bigham et al in the system of Kikuchi et al in order to provide efficient resource management to optimize economies of scale.

The combined system of Kikuchi and Bigham et al does not disclose wherein said operation utilizing a system for compressing an analog broadcast, decoding the compressed digital data and then playing back the resultant data

On the other hand, Kim et al, teaches wherein said operation utilizing a system for compressing an analog broadcast, decoding the compressed digital data and then playing back the resultant data (figure 1, page 2, col 0021)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein said operation utilizing a system for compressing an analog broadcast, decoding the compressed digital data and then playing back the resultant data as taught by Kim et al in the combined system of Kikuchi et al and Bigham et al in order to improve data recording efficiency.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Bigham et al (US 5684799) and further in view of Reitmeier et al (US 4432009)

**Regarding claim 7**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast, wherein said step of converting said bit-rate of the digitized broadcast into a smaller one (claim 4 above)

However, Kikuchi et al do not disclose an operation of returning said broadcast in a baseband, then performing image resolution conversion or image frame rate conversion upon the broadcast and performing the compression processing again upon the resultant broadcast.

On the other hand, Bigham et al, teaches wherein said operation of returning said broadcast in a baseband and performing the compression processing again upon the resultant broadcast is performed (col 9, lines 20 – 30)

It would have been obvious to one of ordinary skill in the art at the time of the



invention to incorporate wherein said operation of returning said broadcast in a baseband and performing the compression processing again upon the resultant broadcast is performed as taught by Bigham et al in the system of Kikuchi et al in order to provide efficient resource management to optimize economies of scale.

The combined system of Kikuchi and Bigham et al does not disclose performing image resolution conversion or image frame rate conversion upon the broadcast

On the other hand, Reitmeier et al teaches performing image resolution conversion or image frame rate conversion upon the broadcast (col 17, lines 44 – 54)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate performing image resolution conversion or image frame rate conversion upon the broadcast as taught by Reitmeier et al in the combined system of Kikuchi et al and Bigham et al in order to improve data recording efficiency.

7. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Bigham et al (US 5684799) and further in view of Reitmeier et al (US 4432009)

**Regarding claim 8**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1 above) wherein said step of converting said bit-rate of the digitized broadcast into a smaller one is performed from the operation of missing a part of the broadcast data (see 4 above)

However, Kikuchi et al do not disclose by selecting one from two kinds of operations, i.e., , the operation of returning the broadcast in a baseband and performing a compression processing again upon the broadcast and the operation of returning the

broadcast in a baseband, then performing image resolution conversion or image frame rate conversion upon the broadcast and performing the compression processing again upon the resultant broadcast

On the other hand Bigham et al discloses the operation of returning the broadcast in a baseband and performing a compression processing again upon the broadcast and the operation of returning the broadcast in a baseband is performed (col 9, lines 20 – 30)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate an operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast is performed as taught by Bigham et al in the system of Kikuchi et al in order to provide efficient resource management to optimize economies of scale.

The combined system of Kikuchi and Bigham et al does not disclose performing image resolution conversion or image frame rate conversion upon the broadcast

On the other hand, Reitmeier et al teaches performing image resolution conversion or image frame rate conversion upon the broadcast (col 17, lines 44 – 54)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate performing image resolution conversion or image frame rate conversion upon the broadcast as taught by Reitmeier et al in the combined system of Kikuchi et al and Bigham et al in order to improve data recording efficiency.

8. Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Hideki et al (JP 10 – 276400)

**Regarding claim 9**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1 above)

However, Kikuchi et al does not disclose if said calculated required capacity of the storage medium cannot be contained, deleting a broadcast which has been already stored in said storage medium to ensure the required capacity of the storage medium.

On the other hand, Hideki et al teaches if said calculated required capacity of the storage medium cannot be contained, deleting a broadcast which has been already stored in said storage medium to ensure the required capacity of the storage medium (Abstract/Solution)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate if said calculated required capacity of the storage medium cannot be contained, deleting a broadcast which has been already stored in said storage medium to ensure the required capacity of the storage medium as taught by Hideki et al in the system of Kikuchi et al in order to record when the capacity is deficient.

**Claim 25** is rejected based on claim 9 above.

9. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Koichi et al (JP 2001- 043115)

**Regarding claim 10**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1 above)

However, Kikuchi et al does not disclose if said calculated required capacity of the storage medium cannot be contained, re-compressing said broadcast which has

been already stored in the storage medium to ensure the required capacity of the storage medium.

On the other hand, Koichi et al teaches if said calculated required capacity of the storage medium cannot be contained, re-compressing said broadcast which has been already stored in the storage medium to ensure the required capacity of the storage medium (Abstract/solution)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate if said calculated required capacity of the storage medium cannot be contained, re-compressing said broadcast which has been already stored in the storage medium to ensure the required capacity of the storage medium as taught by Koichi et al in the system of Kikuchi et al in order to record when the capacity is deficient.

**Claim 26** is rejected based on claim 10 above.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Koichi et al (JP 2001-043115) and further in view of Bigham et al (US 5684799) and still further in view of Reitmeier et al (US 4432009)

**Regarding claim 11**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1 above)

However, Kikuchi et al does not disclose wherein said step of re-compressing said broadcast which has been already stored in the storage medium is performed by the operation of missing a part of the stored broadcast data,

On the other hand, Koichi et al teaches wherein said step of re-compressing said

broadcast which has been already stored in the storage medium is performed by the operation of missing a part of the stored broadcast data (Abstract/solution)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein said step of re-compressing said broadcast which has been already stored in the storage medium is performed by the operation of missing a part of the stored broadcast data as taught by Koichi et al in the system of Kikuchi et al in order to ensure the required capacity of the storage medium.

The combination of Kikuchi et al and Koichi et al does not disclose the operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast

On the other hand, Bigham et al, teaches the operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast (col 9, lines 20 – 30)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the operation of returning said broadcast in a baseband and performing a compression processing again for the broadcast as taught by Bigham et al in the combined system of system of Kikuchi et al and Koichi et al in order to provide efficient resource management to optimize economies of scale.

The combination of Kikuchi et al, Koichi et al and Bigham et al does not disclose the operation of returning said stored broadcast in a baseband then performing image resolution conversion or image frame rate conversion and performing a compression processing again upon the broadcast.

On the other hand, Reitmeier et al teaches the operation of returning said broadcast in a baseband, then performing image resolution conversion or image frame rate conversion upon the broadcast and performing the compression processing again upon the resultant broadcast (col 17, lines 44 – 54)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the operation of returning said broadcast in a baseband, then performing image resolution conversion or image frame rate conversion upon the broadcast and performing the compression processing again upon the resultant broadcast as taught by Reitmeier et al in the combined system of Kikuchi et al, Koichi et al and Bigham et al in order to improve data recording efficiency

11. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Hideki et al (JP 10 –276400) and further in view of Yuasa et al (US 2002/0184457)

**Regarding claim 12**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and Hideki et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage will be deleted

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium, (abstract) a broadcast that a set period of time or longer has passed since its storage will be deleted (page 5, para 0091)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage will be deleted as taught by Yuasa et al in the combined system of Kikuchi et al and Hideki et al in order to improve the efficiency of the recording medium.

**Regarding claim 14**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and Hideki et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which is stored in the storage medium and then copied in other storage medium will be deleted.

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract) a broadcast which is stored in the storage medium and then copied in other storage medium will be deleted (page 1, para 0016).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which is stored in the storage medium and then copied in other storage medium will be deleted as taught by Yuasa et al in the combined system of Kikuchi et al and Hideki et al in order to improve data recording efficiency

12. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Hideki et al (JP 10 -276400) and further in view of Yuasa et al (US 2002/0184457) and still further in view of Carroll et al (US 6016507)

**Regarding claim 13**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and Hideki et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which has been decoded at least once since its storage will be deleted.

On the other hand Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium as taught by Yuasa et al in the combined system of Kikuchi et al and Hideki et al in order to improve data recording efficiency

The combination of Kikuchi et al, Hideki et al and Yuasa et al dose not disclose a broadcast which has been decoded at least once since its storage will be deleted

On the other hand, Carroll et al teaches a broadcast which has been decoded at least once since its storage will be deleted (col 2, lines 64 – 67 and col 3, lines 1 – 10)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast which has been decoded at least once since its storage will be deleted as taught by Carroll et al in the combined system of Kikuchi et al, Hideki et al and Yuasa et al in order to efficiently manage storage of audio and video data in a broadcast environment.

**Regarding claim 16**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)



The combination of Kikuchi et al and Hideki et al does not disclose, wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage, a broadcast which has been decoded at least once since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be deleted, and these broadcasts are selected in accordance with a predetermined priority.

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract) a broadcast that a set period of time or longer has passed since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be deleted (page 1, para 0016).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium a broadcast that a set period of time or longer has passed since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be deleted as taught by Yuasa et al in the combined system of Kikuchi et al and Hideki et al in order to improve data recording efficiency

The combination of Kikuchi et al, Hideki et al and Yuasa does not disclose a broadcast that a set period of time or longer has passed since its storage will be deleted and these broadcasts are selected in accordance with a predetermined priority.

On the other hand, Carroll et al teaches a broadcast that a set period of time or longer has passed since its storage will be deleted and these broadcasts are selected in accordance with a predetermined priority.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast that a set period of time or longer has passed since its storage will be deleted and these broadcasts are selected in accordance with a predetermined priority as taught by Carroll et al in the combined system of Kikuchi et al, Hideki et al and Yuasa et al in order to efficiently manage storage of audio and video data in a broadcast environment.

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Hideki et al (JP 10 -276400) and further in view of Yuasa et al (US 2002/0184457) and still further in view of Plourde, JR et al (US 2003/0110513)

**Regarding claim 15**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and Hideki et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which has been decoded at least once since its storage will be deleted.

On the other hand Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium as taught by Yuasa et al in the combined system of Kikuchi et al

and Hideki et al in order to improve data recording efficiency

The combination of Kikuchi et al, Hideki et al and Yuasa et al does not disclose a broadcast which was stored at the earliest date will be deleted

On the other hand, Plourde, JR et al teaches a broadcast which was stored at the earliest date will be deleted (page 1, para 0015)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast which was stored at the earliest date will be deleted as taught by Plourde, JR et al in the combined system of Kikuchi et al, Hideki et al and Yuasa et al in order to make it more convenient for a user to view a plurality of desirable media content instances.

14. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Koichi et al (JP 2001- 043115) and further in view of Yuasa et al (US 2002/0184457) and still further in view of Kaneko et al (US 6671454)

**Regarding claim 17**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast (claim 1)

However, Kikuchi et al and Koichi et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage will be re-compressed

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract) a broadcast that a set period of time or longer has passed since its storage will be acted upon (page 5, para 0091)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage will be acted upon as taught by Yuasa et al in the combined system of Kikuchi et al and Koichi et al in order to improve data recording efficiency

The combination of Kikuchi et al and Yuasa et al does not disclose a broadcast will be re-compressed

However, Kaneko et al teaches a broadcast will be re-compressed (figure 11, col 13, lines 29 – 31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast will be re-compressed as taught by Kaneko et al in the combined system of Kikuchi et al, Koichi et al and Yuasa et al in order to allow recording of data without failure of loss of data.

**Regarding claim 19**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and Koichi et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which is stored in the storage medium and then copied in other storage medium will be recompressed.

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract) a broadcast which is stored in the storage medium and then copied in other storage medium will be acted upon (page 1, para 0016).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which is stored in the storage medium and then copied in other storage medium will be acted upon as taught by Yuasa et al in the combined system of Kikuchi et al and Koichi et al in order to improve data recording efficiency

The combination of Kikuchi et al, Koichi et al and Yuasa et al does not disclose a broadcast will be re-compressed

However, Kaneko et al teaches a broadcast will be re-compressed (figure 11, col 13, lines 29 – 31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast will be re-compressed as taught by Kaneko et al in the combined system of Kikuchi et al, Koichi et al and Yuasa et al in order to allow recording of data without failure of loss of data.

15. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Koichi et al (JP 2001- 043115) and further in view of Yuasa et al (US 2002/0184457) and still further in view of Carroll et al (US 6016507) and still further in view of Kaneko et al (US 6671454)

**Regarding claim 18,** Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

However, Kikuchi et al and koichi et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which has been

decoded at least once since its storage will be re-compressed

On the other hand Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium will be acted upon (abstract)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium will be acted upon as taught by Yuasa et al in the combined system of Kikuchi et al and Koichi et al in order to improve data recording efficiency

The combination of Kikuchi et al, Koichi et al and Yuasa et al does not disclose a broadcast which has been decoded at least once since its storage

On the other hand, Carroll et al teaches a broadcast which has been decoded at least once since its storage (col 2, lines 64 – 67 and col 3, lines 1 – 10)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast which has been decoded at least once since its storage as taught by Carroll et al in the combined system of Kikuchi et al, Koichi et al and Yuasa et al in order to efficiently manage storage of audio and video data in a broadcast environment.

The combination of Kikuchi et al, Koichi et al, Carroll et al and Yuasa et al does not disclose a broadcast will be re-compressed

However, Kaneko et al teaches a broadcast will be re-compressed (figure 11, col 13, lines 29 – 31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast will be re-compressed as taught by Kaneko et al in

the combined system of Kikuchi et al, Koichi et al Carroll et al and Yuasa et al in order to allow recording of data without failure of loss of data.

**Regarding claim 21**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

The combination of Kikuchi et al and Koichi et al does not disclose, wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast that a set period of time or longer has passed since its storage, a broadcast which has been decoded at least once since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be acted upon, and these broadcasts are selected in accordance with a predetermined priority.

On the other hand, Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract) a broadcast that a set period of time or longer has passed since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be acted upon

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium a broadcast that a set period of time or longer has passed since its storage, a broadcast which is stored in the storage medium and then copied in other storage medium or a broadcast which was stored at the earliest date will be acted upon as taught by Yuasa et al in the combined system of Kikuchi et al and Koichi et al in

order to improve data recording efficiency

The combination of Kikuchi et al, Koichi et al and Yuasa does not disclose a broadcast that a set period of time or longer has passed since its storage are selected in accordance with a predetermined priority.

On the other hand, Carroll et al teaches a broadcast that a set period of time or longer has passed since its storage and these broadcasts are selected in accordance with a predetermined priority.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast that a set period of time or longer has passed since its storage are selected in accordance with a predetermined priority as taught by Carroll et al in the combined system of Kikuchi et al, Koichi et al and Yuasa et al in order to efficiently manage storage of audio and video data in a broadcast environment.

The combination of Kikuchi et al, Koichi et al, Carroll et al and Yuasa et al does not disclose a broadcast will be re-compressed

However, Kaneko et al teaches a broadcast will be re-compressed (figure 11, col 13, lines 29 – 31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast will be re-compressed as taught by Kaneko et al in the combined system of Kikuchi et al, Koichi et al Carroll et al and Yuasa et al in order to allow recording of data without failure of loss of data.

16. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Koichi et al (JP 2001- 043115) and further in view of



Yuasa et al (US 2002/0184457) and still further in view of Plourde, JR et al (US 2003/0110513) and still further in view of Kaneko et al (US 6671454)

**Regarding claim 20**, Kikuchi et al discloses the method for ensuring a storage time for digital broadcast of (claim 1)

The combination of Kikuchi et al and Koichi et al do not disclose wherein when a plurality of already stored broadcasts exist in the storage medium, a broadcast which has been decoded at least once since its storage.

On the other hand Yuasa et al teaches wherein when a plurality of already stored broadcasts exist in the storage medium (abstract)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate wherein when a plurality of already stored broadcasts exist in the storage medium as taught by Yuasa et al in the combined system of Kikuchi et al and Koichi et al in order to improve data recording efficiency

The combination of Kikuchi et al, Koichi et al and Yuasa et al dose not disclose a broadcast which was stored at the earliest date will be acted upon

On the other hand, Plourde, JR et al teaches a broadcast which was stored at the earliest date will be acted upon (page 1, para 0015)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast which was stored at the earliest date will be acted upon as taught by Plourde, JR et al in the combined system of Kikuchi et al, Koichi et al and Yuasa et al in order to make it more convenient for a user to view a plurality of desirable media content instances.

The combination of Kikuchi et al, Koichi et al, Yuasa et al and Plourde, JR et al does not disclose a broadcast will be re-compressed

However, Kaneko et al teaches a broadcast will be re-compressed (figure 11, col 13, lines 29 – 31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a broadcast will be re-compressed as taught by Kaneko et al in the combined system of Kikuchi et al, Koichi et al, Yuasa et al and Plourde, JR et in order to allow recording of data without failure of loss of data.

17. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al (US 7136573) in view of Graziano et al (US 2003/0099285)

**Regarding claim 27**, Kikuchi et al discloses ensuring a storage time for digital broadcast with said required capacity calculation circuit, said determination circuit and said bit-rate conversion circuit (claim 1 above)

However Kikuchi et al does not disclose circuits integrated onto a chip

On the other hand Graziano et al teaches circuits integrated onto a chip (figure 29, page 8, para 0183)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate circuits integrated onto a chip as taught by Graziano et al in the system of Kikuchi et al in order to reduce the size of the equipment.

### **Conclusion**

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

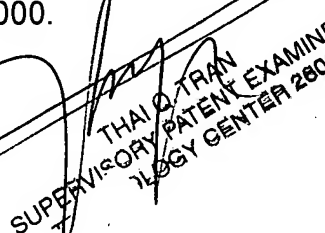
MacInnis (US 7177522) discloses a system and method for personal video recording.

Takahashi et al (2005/0163473) discloses a signal reproducing method & apparatus, signal recording/reproducing method & apparatus and signal recording medium.

Graves (US 4825286) discloses a digitization of video signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Y. Hasan whose telephone number is 571-270-1082. The examiner can normally be reached on 9/8/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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